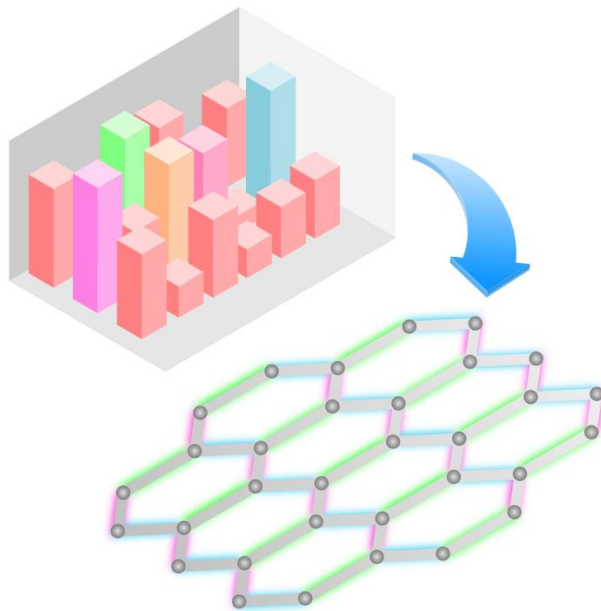


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Quantum materials design: challenges and opportunities

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Unconventional superconductivity with high critical temperatures, frustrated magnetism, spin-liquid phases or the recently discussed Kitaev phases are a few examples of exotic states in quantum materials. One of the big challenges in quantum physics is the microscopic description of such materials. Moreover, being able to understand them implies the possibility of predicting compounds with desirable properties. In this talk, I will present and discuss strategies for designing quantum materials from first principles and will motivate their possible use for present technological applications.